

**Notice of Allowability**

Applicant(s) N .

10/085,798

Examiner

Michelle R. Connelly-Cushwa

Applicant(s)

BERKEY ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's Amendment filed May 13, 2004.
2. ☒ The allowed claim(s) is/are 1-17, 20, 22 and 32-47.
3. ☒ The drawings filed on 09 July 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's Amendment filed May 13, 2004 has been fully considered and entered.

### ***Allowable Subject Matter***

Claims 1-17, 20, 22 and 32-47 are allowed.

The following is a statement of reasons for allowance: The prior art cited on the PTO-892 forms attached to Office actions mailed on June 9, 2003 and March 1, 2004 is the most relevant prior art known. However the invention of claims 1-17, 20, 22 and 32-47 distinguishes over the prior art of record for the following reasons.

Regarding claims 1-17 and 32-38; the claims are allowable for the reasons stated in the Office Action mailed March 1, 2004.

Regarding claims 20 and 39; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 39, wherein at the operating wavelength each mode has a group time delay and all of the group time delays are all negative, each of the group time delays being referenced relative to a lowest order node ( $LP_{01}$  mode) associated with the fiber in combination with the other limitations of claim 39. Claim 20 depends from claim 39.

Regarding claims 22 and 40; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 40; wherein the fiber is configured for

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multimode operation at a wavelength less than 1300 nm and single mode operation at a wavelength of at least approximately 1300 nm in combination with the other limitations of claim 40. Claim 22 depends from claim 40.

Regarding claim 41; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 41, wherein the fiber is configured to have a bandwidth of at least approximately 0.6 GHz.km at 850 nm in combination with the other limitations of claim 41.

Regarding claim 42; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 42, wherein the core has a diameter in the range of approximately 6.0 to approximately 16.0 micrometers and a maximum index difference between the core and the cladding is in the range of approximately 0.3 to approximately 0.5% in combination with the other limitations of claim 42.

Regarding claim 43; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 43, wherein the length of the optical fiber is in the range of approximately 10-20 m, an absolute value of the difference between the operating wavelength and the peak bandwidth wavelength is in the range of approximately 80-150 nm, and the bandwidth is 0.6-1.2 GHz.km at the operating wavelength in combination with the other limitations of claim 43.

Regarding claim 44; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 44, wherein the length of the optical fiber is in the range of approximately 20-100 m, an absolute value of the difference between the operating wavelength and the peak bandwidth wavelength is in the range of approximately 12-80 nm, and the bandwidth is 1.2-7 GHz.km at the operating wavelength in combination with the other limitations of claim 44.

Regarding claim 45; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 45, wherein the length of the optical fiber is in the range of approximately 100-1000 m, an absolute value of the difference between the operating wavelength and the peak bandwidth wavelength is in the range of approximately 2-12 nm, and the bandwidth is 7-13 GHz.km at the operating wavelength in combination with the other limitations of claim 45.

Regarding claim 46 and 47; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious an optical fiber as defined in claim 46, wherein the length of the optical fiber is in greater than 1000 m, an absolute value of the difference between the operating wavelength and the peak bandwidth wavelength is greater than 0 and less than approximately 2 nm, and the bandwidth is greater than 3 GHz.km at the operating wavelength in combination with the other limitations of claim 46. Claim 47 depends from claim 46.

Hence, there is no reason or motivation for one of ordinary skill in the art to use the prior art of record to make the invention of claims 1-17, 20, 22 and 32-47.

***Conclusion***

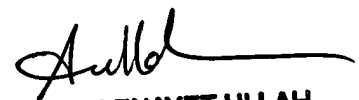
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.

MRCC  
Michelle R. Connelly-Cushwa  
Patent Examiner  
June 3, 2004

  
AKM ENAYET ULLAH  
PRIMARY EXAMINER